

IN THE CLAIMS:

Please cancel Claims 6, 7, 9, 10, 13, 15, 17, 19 and 21 without prejudice or disclaimer of the subject matter recited therein.

Please amend Claims 1, 3 and 4 and add new Claims 22 and 23 as follows.

1. (Currently Amended) An image forming apparatus including a plurality of electron-emitting devices ~~arranged~~ wired in a matrix of rows and columns, and fluorescent substances for emitting light by electrons emitted by the electron-emitting devices, further comprising:

a circuit configured to output an image signal, based on an input image signal, wherein a frame rate of an image formed by the image signal is higher than a frame rate of the input image signal,

wherein the image signal output by said circuit satisfies the following conditions:

x is a normalized driving time period normalized to a maximum time period, during which time the fluorescent substances are continuously irradiated with electrons emitted from the electron-emitting devices driven by the image signal output from said circuit,

y is a normalized luminance normalized to an amount of light emitted by the fluorescent substances, resulting from irradiation by electrons emitted from the electron-emitting devices in the maximum time period,

in a graph whose abscissa x and ordinate y , a plurality of normalized luminance which are measured at a plurality of driving time periods, each of which has equal time intervals less than 5.s are plotted on the graph, wherein the plurality of driving time periods do not include $x=0$ and $x=1$,

normalized luminance not falling within a range defined by lines $y=x$ and $y=x^{0.8}$ on the graph, wherein the range includes a border, are 4/15 or less of the plurality of normalized luminance;

a plurality of memories, each of which is configured to store a part of the image signals of one line of the image; and

a controller configured to control reading of the image signals from said plurality of memories.

frame rate conversion means for converting a frame rate of an input image signal;

wherein said frame rate conversion means converts the frame rate of the input image signal so that a luminance characteristic of the fluorescent substances depending on an electron irradiation time for the fluorescent substances substantially has a linearity;

Claim 2. (Cancelled).

3. (Currently Amended) The image forming apparatus according to claim 1, wherein ~~the frame rate is converted simultaneously when~~ said circuit converts a signal for an interlaced scanning ~~is converted~~ into a signal for a non-interlaced scanning.

4. (Currently Amended) The image forming apparatus according to claim 1, further comprising means for performing pulse width modulation by the image signal ~~whose frame rate is converted~~ output from said circuit.

Claims 5-11. (Cancelled).

12. (Original) The image forming apparatus according to claim 1, wherein the electron-emitting devices are surface-conduction type electron-emitting devices.

Claim 13. (Cancelled).

14. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 500 V than a potential applied to the electron-emitting devices in order to emit electrons.

Claim 15. (Cancelled).

16. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 3 kV than a potential applied to the electron-emitting devices in order to emit electrons.

Claim 17. (Cancelled).

18. (Original) The image forming apparatus according to claim 1, further comprising an electrode to which a potential for accelerating electrons emitted by the electron-emitting devices applies, wherein the potential is higher by not less than 5 kV than a potential applied to the electron-emitting devices in order to emit electrons.

Claim 19. (Cancelled).

20. (Previously Presented) The image forming apparatus according to claim 1, wherein the plurality of electron emitting devices and the fluorescent substances are arranged apart from each other.

Claim 21. (Cancelled).

22. (New) The image forming apparatus according to claim 1, with said plurality of memories comprising:

a plurality of first memories, each of which is configured to store a part of a first color image signal of one line of the image;

a plurality of second memories, each of which is configured to store a part of a second color image signal of one line of the image; and

a plurality of third memories, each of which is configured to store a part of a third color signal output from said plurality of memories.

23. (New) The image forming apparatus according to claim 1, further comprising a plurality of shift registers, each of which is configured to input an image signal output from said plurality of memories.